Study finds wide hospital variation in medicare expenditures to treat surgical complications

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Surgery complications:
Patients’ fate & costs can vary widely

1 in 10
patients over 65 suffered a major complication after surgery on their aorta, lung or gut.

12 to 18%
of such patients died - a situation known as "failure to rescue"

$60,000 vs $23,000
The difference in what hospitals got paid for caring for aorta operation patients who were rescued from the same complication. Similar differences were seen for other operations.

27% or more
The added risk of complications for patients treated at the higher-cost hospitals. But those hospitals did no better at rescuing patients from major complications.

These are the key findings from a study of surgical complication rates, outcomes, costs and hospital-to-hospital variation, carried out by University of Michigan researchers and published in JAMA Surgery Credit: University of Michigan
In a study published online by *JAMA Surgery*, Jason C. Pradarelli, M.D., M.S., of Brigham and Women's Hospital, Boston, and colleagues evaluated differences across hospitals in the costs of care for patients surviving perioperative complications after major inpatient surgery.

Surgical complications are expensive events for patients, hospitals, and payers. The costs associated with rescuing patients from perioperative complications are poorly understood. In this study, the researchers used claims data from the Medicare Provider Analysis and Review files and compared payments for patients who died vs patients who survived after perioperative complications occurred. Hospitals were stratified using average payments for patients who survived following complications, and payment components were analyzed across hospitals nationwide. The study included Medicare patients age 65 to 100 years who underwent **abdominal aortic aneurysm** repair (n = 69,207), colectomy for cancer (n = 107,647), pulmonary resection (n = 91,758), and total hip replacement (n = 307,399) between 2009 and 2012.

The average age for Medicare beneficiaries in this study ranged from 74 years (pulmonary resection) to 78 years (colectomy); most patients were white. Among patients who experienced complications, those who were rescued had higher price-standardized Medicare payments than did those who died for all 4 operations. Assessing variation across hospitals, the researchers found that payments for patients who were rescued (who survived following complications) at the highest cost-of-rescue hospitals were 2- to 3-fold higher than at the lowest cost-of-rescue hospitals for abdominal **aortic aneurysm repair** ($60,456 vs $23,261), colectomy ($56,787 vs $22,853), pulmonary resection ($63,117 vs $21,325), and **total hip replacement** ($41,354 vs $19,028).

Compared with lowest cost-of-rescue hospitals, highest cost-of-rescue hospitals had higher risk-adjusted rates of serious complications with similar rates of failure to rescue and overall 30-day mortality.
"This study presents important considerations for emerging policy initiatives. While innovative reimbursement strategies, such as accountable care organizations and bundled payments, aim to reward cost-efficient hospitals that provide high-quality care, a concern is that surgical quality at expensive hospitals might decrease further if their reimbursements are reduced. However, this analysis suggests that steering patients away from these hospitals has the potential to both lower Medicare spending and improve the safety of surgical care for patients," the authors write.

"In this study, the lowest cost-of-rescue hospitals demonstrated lower rates of perioperative complications in general. Furthermore, these lower-cost hospitals did not sacrifice clinical quality when treating patients who did incur adverse events (i.e., their rates of failure to rescue were equivalent to rates at higher-cost hospitals). This study provides evidence for cost-efficiency while effectively treating patients with perioperative complications. Emerging payment policies that incentivize high-quality care at lower costs may lead to previously unforeseen benefits even when applied to surgical patients who experience costly complications."

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